

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

PCT

To:
 CARLSON, GASKEY & OLDS, P.C.
 Attn. Koziarz, Matthew L.
 400 West Maple Road, Suite 100
 Birmingham, Michigan 48009
 UNITED STATES OF AMERICA

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL SEARCH REPORT AND THE WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY, OR THE DECLARATION

JUN 13 2005

(PCT Rule 44.1)

Applicant's or agent's file reference
 60158-294

International application No.
 PCT/US2005/003942 ✓

Applicant

COOPER-STANDARD AUTOMOTIVE INC.

Date of mailing
 (day/month/year)

08/06/2005

FOR FURTHER ACTION

See paragraphs 1 and 4 below

International filing date
 (day/month/year)

04/02/2005 ✓

1. The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.

Filing of amendments and statement under Article 19:

The applicant is entitled, if he so wishes, to amend the claims of the International Application (see Rule 46):

AK
 When? The time limit for filing such amendments is normally 2 months from the date of transmittal of the International Search Report; however, for more details, see the notes on the accompanying sheet.

Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes
 1211 Geneva 20, Switzerland, Fascimile No.: (41-22) 740.14.35

For more detailed instructions, see the notes on the accompanying sheet.

2. The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.

3. With regard to the protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

- the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.
- no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. Reminders

Shortly after the expiration of 18 months from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for international publication.

The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. These comments would also be made available to the public but not before the expiration of 30 months from the priority date.

Within 19 months from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later); otherwise, the applicant must, within 20 months from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

In respect of other designated Offices, the time limit of 30 months (or later) will apply even if no demand is filed within 19 months.

See the Annex to Form PCT/IB/301 and, for details about the applicable time limits, Office by Office, see the *PCT Applicant's Guide*, Volume II, National Chapters and the WIPO Internet site.

Name and mailing address of the International Searching Authority
 European Patent Office, P.B. 5818 Patentlaan 2
 NL-2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
 Fax: (+31-70) 340-3016

Authorized officer

Alicja Van der Heijden

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

| | | |
|-----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| Applicant's or agent's file reference 60158-294 | FOR FURTHER ACTION <small>see Form PCT/ISA/220 as well as, where applicable, item 5 below.</small> | |
| International application No. PCT/US2005/003942 | International filing date (day/month/year) 04/02/2005 | (Earliest) Priority Date (day/month/year) 06/02/2004 |
| Applicant COOPER-STANDARD AUTOMOTIVE INC. | | |

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. Certain claims were found unsearchable (See Box II).

3. Unity of invention is lacking (see Box III).

4. With regard to the title,

the text is approved as submitted by the applicant.

the text has been established by this Authority to read as follows:

5. With regard to the abstract,

the text is approved as submitted by the applicant.

the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

a. the figure of the drawings to be published with the abstract is Figure No. 3

as suggested by the applicant.

as selected by this Authority, because the applicant failed to suggest a figure.

as selected by this Authority, because this figure better characterizes the invention.

b. none of the figures is to be published with the abstract.

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 F16L11/04 B32B1/08 B32B27/34

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 F16L B32B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category ° | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| X | FR 2 766 548 A (HUTCHINSON) 29 January 1999 (1999-01-29) <i>trans</i> claims 1,5,6,8 page 1, line 3 – line 7 page 2, line 4 – line 16 page 2, line 33 – page 3, line 5 page 3, line 13 – line 29 page 4, line 29 – line 31 ----- EP 1 355 098 A (NOBEL PLASTIQUES) 22 October 2003 (2003-10-22) <i>trans</i> claims 1,2,4-7 paragraphs '0001!, '0008!, '0009!, '0011! – '0018! ----- -/- | 1-12,14, 20-23, 25-30 13, 15-19,24 1-12,14, 20-23, 25-30 -/- |
| Y | | |

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

° Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

Date of mailing of the international search report

27 May 2005

08/06/2005

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Girard, S

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| X | EP 1 362 692 A (MAGNETI MARELLI POWERTRAIN - SPA) 19 November 2003 (2003-11-19) claims 1-5 paragraphs '0001!, '0002!, '0016!, '0018! ----- EP 0 470 605 A (EMS-INVENTA AG) 12 February 1992 (1992-02-12) claims 1,4,9,10,13 page 2, line 1 - line 12 page 3, line 1 - line 6 page 3, line 25 - line 29 ----- US 2002/090477 A1 (ITO HIROAKI ET AL) 11 July 2002 (2002-07-11) claims 1,9,13,16-18,20 ----- EP 1 022 132 A (TEIJIN LIMITED) 26 July 2000 (2000-07-26) claims 1,21 ----- | 1-3, 6-12,14 1-4,6, 10-12, 14, 20-23, 25-30 13, 15-19,24 1-30 |
| Y | | |
| A | | |

| Patent document cited in search report | Publication date | | Patent family member(s) | | Publication date |
|----------------------------------------|------------------|------------|-------------------------------------------------------------------------------------|--|--------------------------------------------------------------------|
| FR 2766548 | A | 29-01-1999 | FR 2766548 A1 | | 29-01-1999 |
| EP 1355098 | A | 22-10-2003 | FR 2838501 A1 BR 0300879 A CA 2424533 A1 EP 1355098 A1 US 2003192612 A1 | | 17-10-2003 17-08-2004 15-10-2003 22-10-2003 16-10-2003 |
| EP 1362692 | A | 19-11-2003 | IT B020020304 A1 BR 0301518 A EP 1362692 A1 US 2004065378 A1 | | 17-11-2003 08-09-2004 19-11-2003 08-04-2004 |
| EP 0470605 | A | 12-02-1992 | DE 4025300 C1 CA 2048715 A1 EP 0470605 A1 JP 4248088 A | | 20-02-1992 10-02-1992 12-02-1992 03-09-1992 |
| US 2002090477 | A1 | 11-07-2002 | JP 2001179798 A EP 1118808 A2 US 2001031330 A1 | | 03-07-2001 25-07-2001 18-10-2001 |
| EP 1022132 | A | 26-07-2000 | DE 69920393 D1 EP 1022132 A1 US 6376043 B1 WO 0005070 A1 TW 500662 B | | 28-10-2004 26-07-2000 23-04-2002 03-02-2000 01-09-2002 |

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

see form PCT/ISA/220

PCT

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

| | | |
|---------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|-------------------------------------------------------------------------|
| | | Date of mailing (day/month/year) see form PCT/ISA/210 (second sheet) |
| Applicant's or agent's file reference see form PCT/ISA/220 | | FOR FURTHER ACTION See paragraph 2 below |
| International application No. PCT/US2005/003942 | International filing date (day/month/year) 04.02.2005 | Priority date (day/month/year) 06.02.2004 |
| International Patent Classification (IPC) or both national classification and IPC F16L11/04, B32B1/08, B32B27/34 | | |
| Applicant COOPER-STANDARD AUTOMATIVE INC. | | |

1. This opinion contains indications relating to the following items:

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

| | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| Name and mailing address of the ISA:  European Patent Office - P.B. 5818 Patentaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016 | Authorized Officer Girard, S Telephone No. +31 70 340-4187 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|



MAP20 Rec'd PCT/PCT 07 AUG 2006

Box No. I Basis of the opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - a sequence listing
 - table(s) related to the sequence listing
 - b. format of material:
 - in written format
 - in computer readable form
 - c. time of filing/furnishing:
 - contained in the international application as filed.
 - filed together with the international application in computer readable form.
 - furnished subsequently to this Authority for the purposes of search.
3. In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2005/003942

**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or
industrial applicability; citations and explanations supporting such statement**

1. Statement

| | | |
|-------------------------------|-------------|-------------------|
| Novelty (N) | Yes: Claims | 10-13,15-20,22-30 |
| | No: Claims | 1-9,14,21 |
| Inventive step (IS) | Yes: Claims | - |
| | No: Claims | 1-30 |
| Industrial applicability (IA) | Yes: Claims | 1-30 |
| | No: Claims | - |

2. Citations and explanations

see separate sheet

Re Item V.

AP20 Rec'd PCT/PTO 07 AUG 2006

1 Reference is made to the following documents:

T D1: FR 2 766 548 A (HUTCHINSON) 29 January 1999 (1999-01-29)

T D2: EP 1 355 098 A (NOBEL PLASTIQUES) 22 October 2003 (2003-10-22)

English OK D3: EP 1 362 692 A (MAGNETI MARELLI POWERTRAIN SPA) 19 November 2003
(2003-11-19)

T D4: EP 0 470 605 A (EMS-INVENTA AG) 12 February 1992 (1992-02-12)

D5: US-A-2002090477 (TOKAI RUBBER INDUSTRIES, LTD.) 11 July 2002 (2002-07-11)

2 INDEPENDENT CLAIMS 1, 14 AND 21

2.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 (resp. claims 14 and 21) is not new in the sense of Article 33(2) PCT.

Document D1 discloses (the references in parentheses applying to this document) a fuel pipe for motor vehicles, comprising an innermost layer of polyphthalamide, attached to an outer layer of thermoplastic resin, possibly PA12 OR 11 (claims 1,5,8; page 1, lines 3-7; page 2, lines 4-16; page 2, line 33-page 3, line 5; page 3, lines 13-29; page 4, lines 29-31).

2.2 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 (resp. claims 14 and 21) is not new in the sense of Article 33(2) PCT.

Document D2 discloses (the references in parentheses applying to this document) a fuel pipe for cars, comprising an intermediate layer made of phthalamide sandwiched between two layers, possibly made of aliphatic polyamides (claims 1,2,4-7; paragraphs 1,8,9,11-18).

2.3 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 (resp. claim 14) is not new in the sense of Article 33(2) PCT. Document D3 discloses (the references in parentheses applying to this document) a

throttle tubular body comprising one layer of polyphthalamide and one layer of aliphatic polyamide (**claims 1-5; paragraphs 1,2,16,18**).

2.4 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 (resp. claims 14 and 21) is not new in the sense of Article 33(2) PCT.

Document D4 discloses (the references in parentheses applying to this document) a fuel pipe for motor vehicles, comprising three layers of compatible polyamide resins, the intermediate one being possibly made of a semi-aromatic polyamide (**claims 1,4,9,10,13; page 2, lines 1-12; page 3, lines 1-6 and lines 25-29**).

3 DEPENDENT CLAIMS 2-13, 15-19, 24, 25

3.1 Dependent claims 2-13, 15-19, 24, 25 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step in view of documents D1 to D5 (Article 33(2) and (3) PCT).

4 INDEPENDENT CLAIM 26

4.1 Document D1 is considered to represent the most relevant state of the art. The subject-matter of independent claim 26 differs from D1, in that, in the present application, the vehicle tubing contains a second layer of aromatic polyamide bonded to the first aromatic polyamide layer.

4.2 The subject-matter of claim 26 is therefore novel (Article 33(2) PCT) The effect of this difference is to increase fuel impermeability in comparison with hoses containing only one barrier layer (see description page 5, lines 22-26). The problem to be solved by the present invention may be regarded as providing a vehicle tubing with improved fuel barrier properties.

4.3 However, the skilled person, starting from any of the documents D1, D2 or D4

disclosing a fuel pipe comprising a fuel barrier layer of an aromatic polyamide, would naturally consider doubling this layer in order to achieve improve barrier properties. Thus, the solution to the problem proposed in claim 26 of the present application cannot be considered as involving an inventive step (Article 33(3) PCT).

5 DEPENDENT CLAIMS 20, 22, 23, 27-30

5.1 Following a reasoning similar to the one carried out in point 4 here above, it appears that dependent claims 20,22,23 and 27-30 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step (Article 33(2) and (3) PCT).

6 FURTHER COMMENTS

6.1 Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the documents D1 to D5 is not mentioned in the description, nor are these documents identified therein.

6.2 Claims 14 and 26 comprise all the features of claim 1, and are therefore not appropriately formulated as claims dependent on the latter (Rule 6.4 PCT).

6.3 The wording of claim 6 is confusing and leaves the reader in doubt as to the meaning of the technical features to which it refers, thereby rendering the definition of the subject-matter of said claim unclear, Article 6 PCT.